User manual

Polymerisation unit

WAPO-MAT

Figure 1: WAPO-MAT

WASSERMANN DENTAL-MASCHINEN

CE

Die Basis für Ihr Labor

Dear customer,

Thank you for choosing a product from the Wassermann range. Wassermann dental equipment incorporates the highest standards of quality and the latest technology.

In order to enjoy maximum performance and years of trouble-free operation, please read this instruction manual carefully before you connect this device and start work, and operate the device according to the recommended guidelines. The operation safety and the functionality of this device can only be guaranteed if you follow both the general safety guidelines and the applying laws to prevent accidents as well as the precautions given in this instruction manual. We are not liable for any damages which occur due to inappropriate usage or faulty operation of this device.

Make sure that anyone using this device has read and understood this instruction manual.

Keep this instruction manual in a safe place where it can be referred to as required at any time.

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WASSERMANN DENTAL-MASCHINEN
Die Basis für Ihr Labor

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1 Features

The well-proven WAPO-MAT polymeriser, now with an easy-clean multifunction display, is a very compact tabletop unit designed for slow, high-temperature polymerising in a water bath.
Up to 9 moulds can be cured, fully automatically, during each polymerisation procedure.
The unit's stainless steel housing and tank guarantee a long service life. It also has a safety cut-out to protect the heater in case the water level drops too low.

2 For your safety

2.1 Your user manual

Configuring and operating this equipment requires ***precise knowledge*** and ***observance*** of the instructions in this ***user manual***. The equipment is designed only for its intended application.
Important safety symbols used in this manual:

Warning!
This is a warning of risk situations and dangers. Failure to observe this warning could be life-threatening. These warnings must be heeded.

Information!
This symbol draws your attention to specific features, which should be noted.

2.2 Safety guidelines

This equipment is designed for 220-240 V / 50/60 Hz.
Make sure it is connected to the correct power supply.
Disconnect the power cord before carrying out maintenance or cleaning work.

2.3 Responsibility for operation and damage

The responsibility for operating the equipment lies exclusively with the owner or user if said equipment is incorrectly serviced, maintained or altered by persons not employed by an authorized dealer, or if the equipment is used in a manner contrary to its specified purpose.
The equipment must be maintained and operated in accordance with this user manual. Wassermann Dental-Maschinen GmbH is not responsible for damage arising from the ***non-observance*** of these instructions.
Guarantee and responsibility provisions contained in the sales and supply conditions of Wassermann Dental-Maschinen GmbH are not extended by these instructions.

Ensure that this user manual is accessible at all times and has been read and understood.

3 Application

The WAPO-MAT is designed for water-bath polymerisation. All readily available plastics can be polymerised fully automatically, slowly (up to 12 hours), and at high temperature (95°C). Only use the device for this type of application.

4 Before you start

4.1 Unpacking / Transport

- Remove the packing materials and place the unit on a firm, level surface. Check the accessories are correct (see 8.4).
- When moving the unit, ensure that you have disconnected the power cord. Use appropriate packing materials to avoid accidental damage.

4.2 Set-up / Storage

- Set the machine up on a level surface.
- Use the clip to attach the drain hose supplied firmly to the housing to ensure there is adequate drainage.
- Always set up the equipment with sufficient space around it for working and servicing (take its dimensions into consideration). **Do not set it up out of doors**.
- If the unit is to be stored for an extended period, protect it from moisture and dust.

We recommend installing the polymeriser directly to the drainage system, because the water draining from it can be very hot (approx. 95°C). This also makes it much easier to empty the tank completely for cleaning, for example.

5 Start-up

- Plug in the power cable (220-240 V / 50/60 Hz).
- Fill the tank with water up to the white plastic ring (max. 18.5 litres).
- Turn on the main switch (green rocker switch).
- The unit starts heating up immediately to the last stored temperature.
- When the desired temperature is reached, the yellow LED goes out and the unit is ready for use.

Use heat-resistant gloves when working with the WAPO-MAT.

The WAPO-MAT has a dry-run cut-out in order to prevent the heater burning out when there is insufficient water in the tank (orange LED). A warning signal also sounds while the program is running.

Make sure that the water level is always above the white plastic ring (inside tank); otherwise the heater will shut off automatically.

On addition there is a safety step: the heating stops automatically when the temperature of the heating is higher than 99 °C.

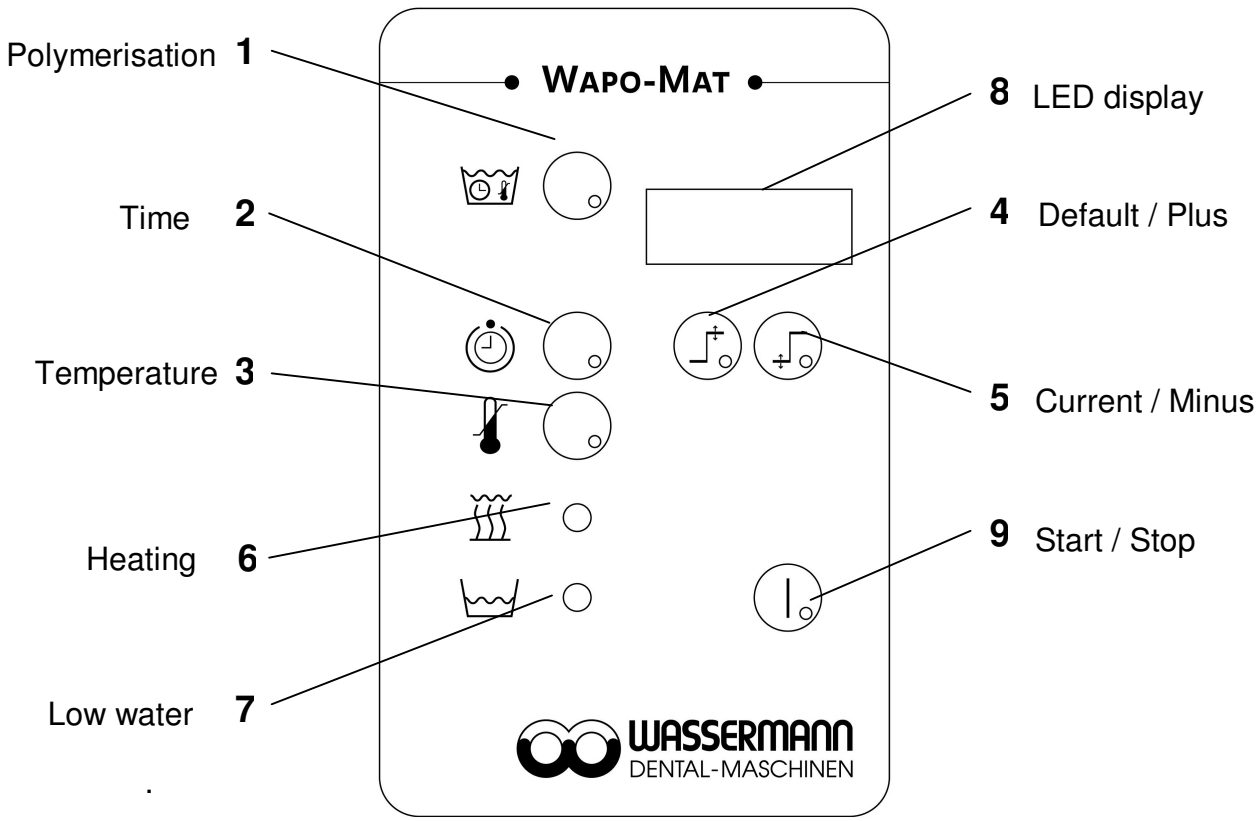
If the equipment is not to be used for an extended period, disconnect the power plug from the mains switch.

6 Use

6.1 Operation

1. Turn on the main switch (green rocker switch).
2. Check the water level – the orange low-water light (7) should not be on or flashing.
3. Place the prepared moulds in the holder.
4. Set the desired polymerisation time (2) (see 6.2).
5. Set the desired temperature (3) (see 6.2).
6. Press the Start/Stop button (9) to start polymerisation.
7. The yellow LED (6) comes on during heating.
8. The unit switches off automatically at the end of the polymeriation time.

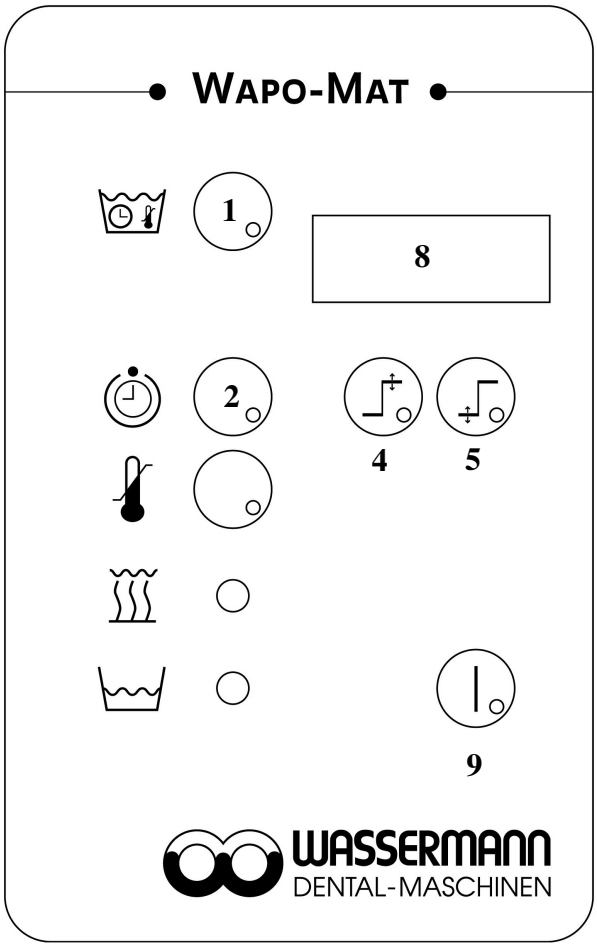
Note: The red LEDs indicate the active controls.



6.1.1 Polymerisation (choice of 3 times and 3 temperatures)

The Polymerisation (1) and Set-Point (4) LEDs must be on, but not Start/Stop (9). Use the buttons as described below to set the function. This allows you to check and/or change stored values.

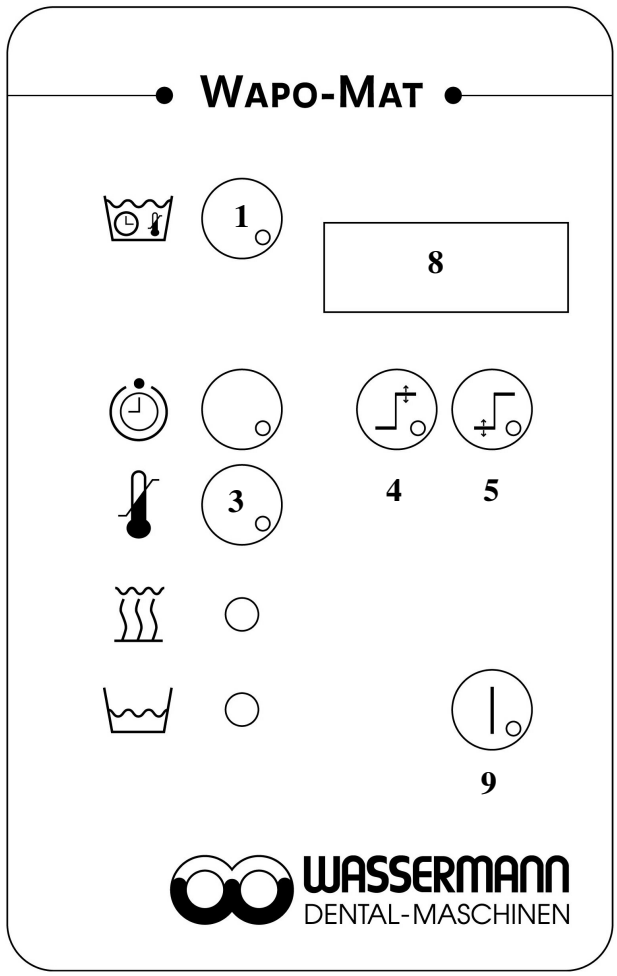
6.1.2 Setting the time



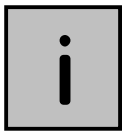
1. Press and hold Time (2), then press Start/Stop (9) once. The first character on the display (8) flashes to indicate that the value can be changed by pressing Set-Point (4) or True Value (5) while Time (2) is held on. Release all three buttons to store the changed value.
2. Store the value by simultaneously pressing Polymerisation (1) and Set-Point (4).
3. For the second value, press and hold Time (2) again, then press Start/Stop (9) once. The second character on the display flashes. Follow the same sequence as above.
4. The procedure is the same for the third display character. Each change needs to be stored.
5. If Time (2) is pressed and held, and Start/Stop (9) pressed a fourth time, the total of the three individual times is displayed. ***Times assigned the value zero (0) are ignored.***

6.1.3 Setting the temperature

1. Press and hold Temperature (3), then press Start/Stop (9) once. The first character on the display (8) flashes to indicate that the value can be changed by pressing Set-Point (4) or True Value (5) while Temperature (3) is held on. Release all three buttons to store the changed value.
2. The value is stored by simultaneously pressing Polymerisation (1) and Set-Point (4).
3. For the second value, press and hold Temperature (3), then press Start/Stop (9) once. The second character on the display flashes. Follow the same sequence as above.



4. The procedure is the same for the third display character. Each change needs to be stored.
5. If Temperature (3) is pressed and held, and Start/Stop (9) pressed a fourth time, the first of the three individual temperatures is displayed.



All recommendations for the use of this equipment, whether in the form of verbal or written instructions or examples, are based on our own experience and testing and can only be regarded as guidelines.

6.2 Storing settings

Individual settings can be stored by simultaneously pressing the Polymerisation (1) **and** Default (4) buttons.

When you store a setting, a YES appears on the LED display.

The old setting is overwritten each time you store a new one.

Note: You can return to the Wassermann default settings by pressing Polymerisation (1) **and** Current (5) simultaneously. When you store them by pressing Polymerisation (1) and Plus (4), this is confirmed by a YES on the display.

Polymerisation default settings

Time	Temperature
6h:30 m	70º C
0h:00 m	0º C
1h:30 m	95º C

7 Troubleshooting / Correcting errors

Fault	Likely cause	Likely solution
WAPO-MAT does not heat up	Dirty level sensor	Clean level sensor
	Water level too low	Add water
Water-level LED comes on and warning tone sounds	Dirty level sensor	Clean level sensor
	Water level too low	Add water until red LED goes out and tone stops
Multi-function display not working correctly	Variations in mains voltage (220-240 V / 50/60 Hz)	Turn of main switch and turn on again in about 1 minute.
Multifunction display shows **A**	Water-temperature above 100°C (A3 means 103 °C) -faulty temperature sensor -faulty control board	Turn off the water supply, switch off the unit completely, contact service
Multifunction display shows **F 1**	Short-circuit: Faulty electrial component	Turn off the water supply, switch off the unit completely, contact service
Multifunction display shows **F 2**	Faulty temperature sensor	Turn off the water supply, switch off the unit completely, contact service

If the above measures do not solve the problem, contact your dental depot or our service department.

8 Maintenance

8.1 Cleaning

The equipment should be cleaned regularly (ie, clean every 4 weeks with Kalk-Ex) to guarantee problem-free operation.

Quantity: approx. 300ccm Kalk-Ex per full tank (18.5 litres water).

If there is considerable limescale present, increase the amount of Kalk-Ex appropriately.

The *initial supply* of Kalk-Ex comes with the machine.

Clean the level sensor (white plastic ring) in the tank using a nailbrush, for example.

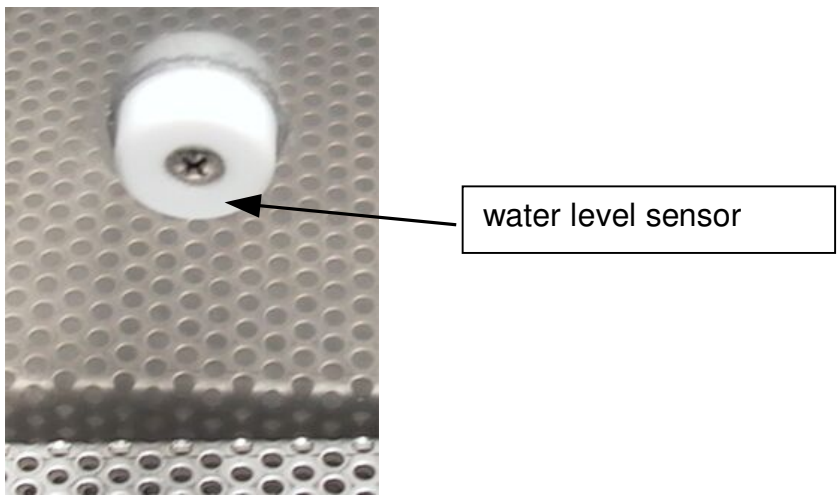
Clean the outside of the unit and any accessories with a sponge and/or a soft cloth and mild detergent.

The **model plate** must always be legible and must not be removed.

Warning: Leave KALK–EX to work for a maximum 12 hours. Then drain the tank and rinse thoroughly.

Warning!

Please clean the water level sensor every 14 days with a brush.



8.2 Maintenance

The WAPO–MAT does not require any special maintenance. You just need to keep it **clean**.

9 Warranty

The warranty period for our equipment is 12 months. If faults occur within the warranty period, contact your dental depot or get in touch directly with our Service department.

Your polymeriser should only be operated in perfect condition. If faults occur which could harm operators or third parties, the unit should not be used until it has been fixed.

The warranty does not cover damage caused by improper use, external mechanical causes, transport damage or interference with the unit by unauthorized persons.

Spare parts and accessories

Spare parts	
Item no.	Name
170601	Button cover
170625	Cover, compl.
392008	Rubber foot, 32 x 32 – H6, black
511091	Rocker switch, green

Accessories	
Item no.	Name
320030	PVC hose, 19 x 4 (¾") – 1500 mm long
322017	Hose protector Ø 20 – 32 x 12.2
655002	Kalk–Ex - 1000 ccm

9.1 Repairs

Servicing or repairs to the equipment must only be carried out by trained technicians. Only **original Wassermann spares** are to be used. Responsibility for the product is voided if altered by unauthorised persons or if inappropriate components are installed.

10 Technical specifications

170998 WAPO - MAT

Voltage:	220-240 V / 50/60 Hz
Power consumption:	8 A
Output:	1800 W
Capacity:	max. 18.5 L
Overall dimensions:	Width 330 mm
	Height 460 mm
	Depth 530 mm
Weight:	18.5 kg

Noise emission **≤ 70 dB(A)**

We reserve the right to make technical changes.

11 EC CONFORMITY CERTIFICATE

in accordance with 2006/95/EG (low-voltage guidelines) and 2004/108/EG (EMV guidelines) and 98/37/EG (Machinery guidelines)

Manufacturer: W A S S E R M A N N
Dental-Maschinen GmbH
Rudorffweg 15 - 17
D-21031 Hamburg

Product description: Polymeriser for dental applications

Model: WAPO-MAT (170998)

Applicable standards:
DIN EN 61010-1:2004
DIN EN 61000-6-3:2005
DIN EN 61000-6-1:2002
DIN 45635-1:1984
DIN EN 60335-1:2007

Hiermit wird bestätigt, daß die oben bezeichnete Maschine den genannten EG-Richtlinien entspricht. Diese Erklärung wird ungültig, falls die Maschine ohne unsere Zustimmung verändert wird.

This is to confirm that the above mentioned machine complies with the described EC rules. This declaration becomes invalid if the machine is modified without our approval.

Cette machine est conforme aux normes en vigueur de la Communité Européene. Cet avis est nul et non avenant si cette machine est modifiée sans notre accord.

Esta máquina, anteriormente mencionada, cumple con los limites requeridos por el reglamento EC. Ahora bien, esta declaración quedará invalidada en caso de realizar modificaciones al aparato sin nuestra aprobación.

Hiermee wordt bevestigd dat bovengenoemde machine voldoet aan de voorgeschreven EU normen. Deze verklaring verliest geldigheid als er zonder onze uitdrukkelijke toestemming wijzigen aan de machine worden aangebracht.

Place, date: Hamburg, 20.07.2007

Company stamp:

Signed: _____

Wilfried Wassermann

(Managing Director)

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